FOOD FACTS

From the U.S. Food and Drug Administration

Food and Water Safety During Hurricanes, Power Outages, and Floods

What Consumers Need to Know

Emergencies can happen. When they do, the best strategy is to already have a plan in place. This includes knowing the proper food and water safety precautions to take if hurricanes — or other flooding/power outages — do occur.

Be Prepared for Emergencies

1. Make sure you have **appliance thermometers in your refrigerator** *and* **freezer**.
   - Check to ensure that the freezer temperature is at or below **0 °F**, and the refrigerator is at or below **40 °F**.
   - In case of a **power outage**, the appliance thermometers will indicate the temperatures in the refrigerator and freezer to help you determine if the food is safe.
2. **Freeze containers of water** for ice to help keep food cold in the freezer, refrigerator, or coolers in case the power goes out. If your normal water supply is contaminated or unavailable, the melting ice will also supply drinking water.
3. **Freeze refrigerated items** such as leftovers, milk, and fresh meat and poultry that you may not need immediately. This helps keep them at a safe temperature longer.
4. **Group food together** in the freezer. This helps the food stay cold longer.
5. **Have coolers on hand** to keep refrigerated food cold if the power will be out for more than 4 hours.
6. Purchase or make **ice cubes in advance** and store in the freezer for use in the refrigerator or in a cooler. Freeze **gel packs** ahead of time for use in coolers.
7. Check out local sources to know where **dry ice and block ice** can be purchased, just in case.
8. **Store food on shelves** that will be safely out of the way of contaminated water in case of flooding.
9. Make sure to have a **supply of bottled water** stored where it will be as safe as possible from flooding.

Power Outages: During *and* After

When the Power Goes Out . . .

Here are basic tips for keeping food safe:

- Keep the **refrigerator and freezer doors closed** as much as possible to maintain the cold temperature.
  - — The **refrigerator** will keep food **cold for about 4 hours** if it is unopened.
  - — A **full freezer** will keep the temperature for approximately **48 hours** (24 hours if it is half full) if the door remains closed.
  - — Buy **dry or block ice** to keep the refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18 cubic foot, fully-stocked freezer cold for two days.
- If you plan to eat refrigerated or frozen meat, poultry, fish or eggs while it is still at safe temperatures, it's important that each item is **thoroughly cooked to its proper temperature** to assure that any foodborne bacteria that may be present are destroyed. However, if at any point the food was above 40 ºF for 2 hours or more — discard it.
- **Wash fruits and vegetables** with water from a safe source before eating.
- For infants, try to use prepared, canned baby formula that requires no added water. When using concentrated or powdered formulas, prepare with bottled water if the local water source is potentially contaminated.

Once Power Is Restored . . .

You'll need to determine the safety of your food. Here's how:

- If an appliance thermometer was kept in the freezer, **check the temperature** when the power comes back on. If the freezer thermometer reads 40 °F or below, the food is safe and may be refrozen.
- If a thermometer has not been kept in the freezer, **check each package** of food to determine its safety. You can't rely on appearance or odor. If the food **still contains ice crystals** or is 40 °F or below, it is safe to refreeze or cook.
- Refrigerated food should be safe as long as the power was out for **no more than 4 hours** and the refrigerator door was kept shut. Discard any perishable food (such as meat, poultry, fish, eggs or leftovers) that has been above 40 °F for two hours or more.

Keep in mind that perishable food such as meat, poultry, seafood, milk, and eggs that are **not kept adequately refrigerated or frozen** may cause illness if consumed, even when they are thoroughly cooked.

When Flooding Occurs — Keep Water Safe

Follow these steps to keep your **WATER SAFE during – and after – flood conditions.**

1. Use **bottled water** that has not been exposed to flood waters if it is available.
2. If you don't have bottled water, you should **boil water** to make it safe. Boiling water will kill most types of disease-causing organisms that may be present.
   - If the water is cloudy, filter it through clean cloths, or allow it to settle and then draw off the clear water for boiling.
   - Boil the water for one minute, let it cool, and store it in clean containers with covers.
3. If you can't boil water, you can **disinfect it using household bleach**. Bleach will kill some, but not all, types of disease-causing organisms that may be in the water.

   - If the water is cloudy, filter it through clean cloths, or allow it to settle and then draw off the clear water for disinfection.
   - Add 1/8 teaspoon (or 8 drops) of regular, unscented, liquid household bleach per each gallon of water. Stir it well and let it stand for at least 30 minutes before you use it.
   - Store disinfected water in clean containers with covers.
4. If you have a **well** that has been flooded, the water should be **tested and disinfected** after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or agricultural extension agent for specific advice.

When Flooding Occurs — Keep Food Safe

Follow these steps to keep your FOOD SAFE during — and after — flood conditions.

1. **Do not eat** any food that may have come into contact with flood water.
2. **Discard any food** that is **not in a waterproof container** if there is *any* chance that it has come into contact with flood water.
   - Food containers that are not waterproof include those with screw-caps, snap lids, pull tops, and crimped caps.
   - Also discard cardboard juice/milk/baby formula boxes and home canned foods if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized.
3. Inspect canned foods and **discard any food in damaged cans**. Can damage is shown by swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/denting severe enough to prevent normal stacking or opening with a manual, wheel-type can opener.

4. Undamaged, commercially prepared foods in **all-metal cans** and **"retort pouches"** (like flexible, shelf-stable juice or seafood pouches) can be saved if you follow this procedure:
   - Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
   - Brush or wipe away any dirt or silt.
   - Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available. Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
   - Sanitize cans and retort pouches by immersion in one of the two following ways:
     — Place in water and allow the water to come to a boil and continue boiling for 2 minutes, or
     — Place in a freshly-made solution consisting of 1 tablespoon of unscented liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
   - Air dry cans or retort pouches for a minimum of 1 hour before opening or storing.

   - If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a marking pen.
   - Food in reconditioned cans or retort pouches should be used as soon as possible thereafter.
   - Any concentrated baby formula in reconditioned, all-metal containers must be diluted with clean drinking water.
5. Thoroughly wash metal pans, ceramic dishes, and utensils (including can openers) with soap and water, using hot water if available. Rinse, and then sanitize them by boiling in clean water or immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available).
6. Thoroughly wash countertops with soap and water, using hot water if available. Rinse, and then sanitize by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air dry.

Everyone can practice safe food handling by following these four simple steps:

For more information, contact: The U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition Food Information Line at 1-888-SAFEFOOD (toll free), 10 AM to 4 PM ET, Monday through Friday. Or visit the FDA Web site at www.fda.gov.